1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3	EU - Type Examination Certificate Number:	**SGS21ATEX0002X**
4	Product:	**DCS IS Capacitive Liquid Level Sensor**
5	Manufacturer:	**Deeter Electronics Ltd**
6	Address:	**Deeter House, Valley Road, Hughenden Valley, Buckinghamshire HP14 4LW**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR21.0002/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 EN 60079-11: 2012

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

Ⓔx II 1GD Ex ia IIC T4 Ga or Ex ia IIC T3 Ga
Ex ia IIIB T_{200} 145°C Da or Ex ia IIIB T_{200} 200°C Da
(See Certificate Schedule for Process and Ambient Temperature Information)

SGS Fimko Oy Customer Reference No. **8083** Project File No. **20/0433**

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13 # Schedule

14 ## Certificate Number SGS21ATEX0002X

15 Description of Product

The DCS IS Capacitive Liquid Level Sensor is designed to measure the level of liquids with a dielectric constant (also known as relative permittivity) and outputs 4-20mA & 0-5V signals indicating the liquid level.

The equipment comprises a stainless steel electronics housing containing an encapsulated main circuit and un-encapsulated terminal / button board. The electronics housing is mounted on a stainless steel Sensor Probe stem of up to 6 metres in length which is secured to the process liquid vessel via a mounting thread or flange with the probe inside the vessel measuring the liquid level. The electronics housing and mounting adapter is electrically insulated from the intrinsically safe circuit and passes the 500V dielectric strength test. The sensor is configured using Zero and Span buttons located inside the electronics housing.

External connections to the equipment are made via a threaded cable entry to screw terminals mounted on the terminal / button board.

The DCS IS Capacitive Liquid Level Sensor can be marked with the following temperature classifications with associated process temperature ranges. When the equipment is installed particular cautions must be taken to ensure, taking into account the effect of process temperature, that the ambient temperature range of the electronics housing of -40°C to +70°C is not exceeded:

Certification Code		Probe Process Temperature Range
⟨Ex⟩ II 1 GD	Ex ia IIC T4 Ga (-40°C ≤ T_a ≤ +70°C) Ex ia IIIB T_{200} 145°C Da (-40°C ≤ T_a ≤ +70°C)	-200°C to +125°C
⟨Ex⟩ II 1 GD	Ex ia IIC T3 Ga (-40°C ≤ T_a ≤ +70°C) Ex ia IIIB T_{200} 200°C Da (-40°C ≤ T_a ≤ +70°C)	-200°C to +190°C

Input Parameters

U_i = 25.2V C_i = 0

I_i = 155mA L_i = 0

P_i = 1.2W

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17 Specific Conditions of Use

1. When the equipment is installed particular cautions must be taken to ensure, taking into account the effect of process temperature, that the ambient temperature range of the electronics housing of -40°C to +70°C is not exceeded.

2. Due to the insulated stainless steel Sensor Probe stem forming part of the intrinsically safe circuit, this part of the equipment is not capable of passing the 500V dielectric strength test. This must be taken into account when installing the equipment.

3.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
D 600804	1 of 3	1	4th January 2020	DCS IS all Versions (General Assembly)
D 600804	2 of 3	1	4th January 2020	DCS IS all Versions (General Assembly)
D 600851	1 of 1	2	13/1/21	DCS IS Top & Bottom PCB Track & Component Layout
Sch700497 IssD	1 to 4	D	22/12/2020	DCS Capacitive Sensor PCB (Ex I Version)
LP700497	1 of 1	D.1	22 December 2020	DCS_Ex Capacitive Level Sensor (BOM)

The above drawings are associated, and held with, IECEx BAS 21.0002X Iss. 0.